The John Lawrence Seminars

BERKELEY LAB
Lawrence Berkeley National Laboratory

"High-throughput Genetics for Discovering and Designing Complex Phenotypes "

Adam Arkin, Ph.D.
Berkeley Lab

Many key phenotypes to engineer into organisms are multigenic and have complex dependencies on host physiology and environmental parameters, *e.g.*, microbes designed for production of biofuels in variable & dirty feedstocks; organisms engineered to support plant growth or human health. To discover genetic determinants of both survival and activity in complex natural environments and to stack these traits, a number of high-throughput genetic technologies were adapted and scaled. A novel approach to bar-coded insertion mutagenesis, through genetic interaction mapping using CRISPRi, to extreme QTL mapping. Use of workflow to dissect traits across diverse bacteria and fungi and to engineer better fuel production in inhibitory hydrolysates for bacterial and fungal biofuel strains.

Tues., May 31st
4:00 p.m.

Berkeley Lab
Aquatic Park
717 Potter Street
Room 141

Host:
Mark LaBarge

Schedule of Seminars: http://johnlawrenceseminars.lbl.gov
Non-LBNL attendees: please RSVP to FGuagliardo@lbl.gov or 510-486-6490